

Memorandum

TO: HONORABLE MAYOR AND

CITY COUNCIL

FROM: Ed Shikada

SUBJECT: LEED COST ANALYSIS FOR

PIPELINE PROJECTS

DATE: May 15, 2007

Approved /s/ Date 05/15/07

RECOMMENDATION

- 1. Accept the Cost-Benefit analysis for implementing USGBC LEED measures for six projects currently underway.
- 2. Direct staff to proceed with the following targets:
 - a. USGBC LEED target of Silver Certification for the following projects:
 Bascom Branch Library and Community Center (Joint Facility), Seventrees/Solari Joint Facility, Police Substation.
 - b. Green Building principles incorporated to the best extent possible for Fire Station No. 36
 - c. A cost benefit analysis to be done for Educational Park and Southeast Branch Libraries once site selection has been completed and preliminary design work has begun.
- 3. Adopt the following amendments to the 2007-2008 Proposed Capital Budget in the Branch Libraries Bond Projects Fund (472):
 - a. Increase the Bascom Branch appropriation in the amount of \$318,000;
 - b. Increase the Seventrees Branch appropriation in the amount of \$313,000; and
 - c. Decrease the Contingency Reserve: Library Bond Projects in the amount of \$631,000.
- 4. Adopt the following amendments to the 2007-2008 Proposed Capital Budget in the Parks and Recreation Bond Projects Fund (471):
 - a. Increase the Bascom Community Center Multi-Service appropriation in the amount of \$318,000;
 - b. Increase the Solari Community Center Multi-Service/Senior appropriation in the amount of \$625,000; and
 - c. Decrease the Ending Fund Balance in the amount of \$943,000.

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 2 of 12

OUTCOME

Acceptance of the staff report and recommendations will allow staff to continue work on the projects currently underway along with appropriate funding to target the approved LEED certification level.

EXECUTIVE SUMMARY

Staff has performed an analysis on six pipeline projects to look at the potential of achieving LEED Silver or Gold using two strategies: (1) with minimum initial investment, and (2) with maximum return on investment. In addition to direct costs and benefits, the analysis also takes into account the environmental and occupant health and productivity benefits for their recommendations. Staff is recommending targeting LEED Silver for Bascom Branch Library and Community Center (Joint Facility), Seventrees/Solari Joint Facility, and the Police South Substation projects with the minimum possible initial investment. Staff is recommending a best effort for the Fire Station No. 36 project due to various project constraints. Since a large part of the analysis is site dependent and at this time Educational Park and Southeast Branch Libraries do not yet have sites selected, staff is recommending performing detailed analyses for these projects at a later date.

It should be noted that this recommendation was not based strictly on quantitative analysis, and that staff has reservations about reallocating bond reserves to augment the funding for Bascom Branch Library and Community Center and Seventrees/Solari Joint Facility. These reserves have been put aside to hedge against market volatility and other uncertainties that may affect bond projects yet to be awarded, and therefore future funding actions or scope modifications may be required for the remaining bond projects. However, taking into account the City's environmental priorities and lack of other funding sources, staff believes that this is the appropriate course of action at this time.

BACKGROUND

On March 6, 2007 Council adopted Resolution No. 73676 approving the amended Green Building Policy with the modification to achieve at a minimum the USGBC LEED Silver level of certification with a goal of achieving LEED Gold or Platinum for certain projects budgeted in FY 07-08 or thereafter.

In November 2006, Council had also requested staff to analyze projects that have already been budgeted to look at their potential for LEED. As part of this analysis staff identified five projects that were currently underway as potential candidates for LEED Silver or higher. In the March Council memo, staff used a placeholder number of 3% of construction costs for these projects to calculate additional upfront costs for LEED Silver certification. This number was to be validated through a further detailed cost benefit analysis, the results of which would be brought forward through a Manager's Budget Addendum (MBA) in the Fiscal Year 07-08 Budget process along with any additional funding recommendations. Council accepted staff's recommended strategies

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 3 of 12

for the "pipeline" projects which comprised of the Bascom Branch Library and Community Center, the Solari/Seventrees Joint Facility, Educational Park Branch Library, Fire Station No. 36 and Southeast Branch Library.

ANALYSIS

This report provides information on the cost benefit analyses that was done for the five pipeline projects as well as an analysis for the Police Substation project which is currently in the construction documents phase.

The United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) system is still fairly new and the body of actual performance information for City facilities is relatively thin. In order to gain some consensus regarding costs and benefits for the local area and to draw from the experience of leading professionals in this area, staff hosted an all day workshop on March 12, 2007 to discuss costs and benefits for every point on the LEED scorecard. The workshop included consultants in the fields of sustainability, building lifecycle and construction costs along with several architectural firms that are providing design services for various projects underway. The session also included staff participation from General Services, Public Works, City Manager's Office, Environmental Services, Library and Parks. The goal of the workshop was to identify and prioritize the most achievable points considering both costs and benefits as a means for the City to target the most cost effective approach to implementing green building measures. While the initial effort was for specific pipeline projects, the information gathered and the worksheet developed will serve as a planning and budgeting tool for future projects as well.

As stated in the March 6, 2007 Council presentation, LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. This approach can result in potential environmental, occupant health and financial benefits.

Environmental Benefits: Of these three potential benefits, the environmental benefits can be the most significant on a regional and international scale, however, they are also the hardest to quantify. Environmental benefits can include:

- Reduced pollutants such as those associated with paint, adhesives, carpets, and wood, all of
 which generally contain a wide array of chemical pollutants. Green buildings contain lowemitting materials and thus pose less of a risk to the building's occupants and the natural
 environment.
- Reduced construction waste: Green buildings incorporate recycled materials and reduce construction scrap materials, thus preventing those materials from ending up in landfills.
- Reduction of greenhouse gas emissions: Green buildings help to reduce fossil fuel
 consumption through energy efficiency and the use of clean energy technologies. This
 reduction of fossil fuel consumption is important not only for curbing the long-term impacts
 of global climate change but also for protecting the natural environment today.

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 4 of 12

Forest Ecosystem Protection: Sustainable forest products certified by the Forest Stewardship
Council can significantly reduce buildings' impacts on forest ecosystems. For a forest
product to be certified as sustainable, the forest management unit must demonstrate
responsible forestry practices, including forest ecosystem maintenance, long-term timber
management plans, and wildlife surveys.

Occupant Health Benefits: Staff has attempted to capture the financial benefits of occupant health benefits by using a percentage factor for improved productivity. Several studies have been done that attempt to quantify these benefits. This analysis is based on an October 2003 study titled "The Costs and Financial Benefits of Green Buildings" by Gregory H. Kats of Capital E. The study was commissioned by the State of California's Sustainable Building Task Force, a group of over 40 state agencies run through the Governor's Office. This was the first study of its kind to fully aggregate the costs and benefits of green buildings. The report analyzed existing cost/benefit data as well as data collected from State buildings. Based on the study, staff has attributed a 1% productivity and health gain to the Silver level and a 1.5% gain to the Gold level. This is based on the assumption that green building measures such as increased daylight, individual thermal comfort, controlled lighting levels, and better indoor air quality lead to better employee health and productivity.

Of the six projects being analyzed, four of them are neighborhood serving projects with a lower full time occupant population and high transient user population. Of the remaining two projects, Fire Station No. 36 has a small number of 24-hour staff on duty while the Police Substation has a high number of 24-hour staff on duty along with a lower transient population. The analysis, as expected, shows that anticipated financial benefits are closely linked to the magnitude of occupant population. Thus, of all the projects analyzed, the Police Substation project shows the maximum potential financial benefit and return on investment due to the anticipated increased productivity level of a very large staff population. Although these anticipated savings do not directly translate into General Fund savings, it is theorized that savings would be realized due to future cost avoidance resulting from increased employee health and productivity.

Financial Benefits: The cost/benefit analysis has been calculated using the following methodology. Staff has taken into consideration the premium costs, including construction and project delivery costs, for every LEED point. If a "green" element is already required by Code or is a City standard no additional costs have been factored in. Similarly, any additional savings or costs related to utilities, equipment and operation and maintenance costs have also been captured. Thus, only the delta between standard City practices and special LEED requirements have been used for the analysis. It is important to note that some of the requirements such as stormwater management and reduction of heat island effect on the roof will be required by Code for future projects and thus will not be considered as premium costs.

Key assumptions that have been made for the cost/benefit analysis are:

- 1. Utility escalation rates have been assumed based on trend data from the California Energy Commission and PG&E 6% for power and gas, 4.5% for water
- 2. Labor and equipment escalation rate of 3% is based on trend data provided by Davis Langdon, a cost estimating firm used for several City projects.

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 5 of 12

- 3. A discount rate of 5% has been used to calculate Present Value of O&M costs over the life of the building.
- 4. Employee productivity has been assumed to lead to a 1% increase in productivity for Silver and 1.5% increase for Gold.
- 5. The project life is assumed to be 40 years.
- 6. A cushion of 5 points has been factored into each LEED Level target.

For each of the projects being analyzed, staff is targeting Silver or Gold certification using two discrete strategies: 1) minimum upfront costs, and 2) maximum financial return on investment. Thus, upfront costs for achieving the same LEED level vary substantially. The points have been organized and grouped into Certified, Silver, Gold and Platinum categories based on the project's opportunities as well as the specific strategy being used.

Through several discussions between staff of various departments as well as consultants, it has become apparent that although LEED results in significant energy and water efficiencies, it does not always result in a reduction in operation and maintenance costs. More complex energy systems, customized controllability, single ply roofing systems, vegetated roofs, bio swales, increased glazing areas and materials with greater recycled content could translate into more service calls and shorter replacement cycles. Thus, operational savings due to energy and water efficiencies and maintenance savings due to enhanced commissioning could be offset to some extent by the increased costs mentioned above. Staff is cognizant of the fact that some of the materials, equipment and maintenance practices that are considered a premium at this time will likely become mainstream in the future and has taken this into account in calculating future replacement and maintenance costs for the appropriate elements.

Below is a summary of the cost/benefit analysis and proposed strategies for each of the projects. Additional information on the cost and savings breakdown is included in Attachment A.

• <u>Bascom Branch Library and Community Center</u> – Baseline LEED approach: This project is currently being designed to LEED Certified level, however, costs for actual certification have not been budgeted for.

<u>Incremental budget implication for LEED Certification:</u> An additional \$100,000 will be needed to cover documentation costs for the certification process.

<u>Incremental strategies for LEED Silver:</u> Recycled content materials, use of certified wood, 95% of construction waste diversion from landfills and a storm water management system to manage the rate of flow and to reduce the quantity of pollutants, enhanced refrigerant management; separation of indoor chemicals and pollutants from occupants; a 30% reduction in the use of potable water enhanced commissioning of building systems and ongoing measurement and verification of energy utilization.

Total additional upfront costs: \$636,000 Total additional annual O&M costs: \$9,000

<u>Incremental strategies for LEED Gold:</u> A storm water management system to manage the type of pollutants entering the storm drains; day light and views for 90% of the

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 6 of 12

interior spaces, increased ventilation; a more energy efficient HVAC system, and on-site renewable energy.

Total additional upfront costs: \$1,316,000 Total additional annual O&M costs: \$17,000

• <u>Seventrees / Solari Joint Facility</u> - Baseline LEED approach: This project is currently being designed to LEED Certified level, however, costs for actual certification have not been budgeted for.

<u>Incremental budget implication for LEED Certification:</u> An additional \$100,000 will be needed to cover documentation costs for the certification process.

Incremental strategies for LEED Silver: Storm water management system to manage the rate of flow and to reduce the quantity of pollutants as well as to manage the quality of pollutants, enhanced refrigerant management, reduction of the heat island effect; separation of indoor chemicals and pollutants from occupants, ongoing monitoring of the CO₂ levels; more energy efficient HVAC system, enhanced commissioning, measurement and verification of energy utilization, and a 30% reduction in the use of potable water.

Total additional upfront costs: \$ 938,000 Total additional annual O&M costs: \$8,000

<u>Incremental strategies for LEED Gold:</u> Further reduction of the heat island effect, 95% of construction waste diversion from landfill, improved ventilation and day light and views to the outside from 90% of the interior spaces.

Total additional upfront costs: \$1,378,000 Total additional annual O&M costs: \$16,000

• <u>Police Substation</u> – Baseline LEED approach: This project is currently being designed to LEED Silver level using the following strategies: diversion of construction waste from landfills and a storm water management system including a vegetated roof; green housekeeping, increased daylight and views to the outside from 75% of the interior spaces, and use of low emitting materials; a 30% reduction in the use of potable water, a high efficiency HVAC system and measurement and verification of energy usage.

<u>Incremental strategies for LEED Gold:</u> Use of materials with a 20% recycled content, use of rapidly renewable materials, increased ventilation, reduction of the heat island effect.

Additional upfront costs: \$791,000

Total additional (from LEED Silver) annual O&M savings: \$(3,000)

• **Fire Station No. 36** – Baseline LEED approach: This project is currently incorporating green building principles to the maximum extent possible.

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 7 of 12

<u>Incremental strategies for LEED Certification</u>: Use of materials with recycled content, use of regional materials; outdoor air delivery monitoring, separation of indoor chemicals and pollutants; fundamental building commissioning.

Additional upfront costs: \$ 377,000

Total additional annual O&M costs: \$3,000

<u>Incremental strategies for LEED Silver:</u> Storm water management system to manage the pollutants, use of certified wood and rapidly renewable materials, enhanced refrigerant management, and encouraging the use of fuel efficient vehicles; daylight and views to the outside from 90% of interior spaces, and increased ventilation, a more energy efficient HVAC system, enhanced commissioning of building systems and reduction in the use of potable water.

Total additional upfront costs: \$870,000 Total additional annual O&M costs: \$8,000

<u>Incremental strategies for LEED Gold:</u> Further optimization of energy usage and on-site renewable energy.

Total additional upfront costs: \$1,636,000 Total additional annual O&M costs: \$14,000

• Educational Park Branch Library – Baseline LEED approach: This project is currently targeting designing to a LEED certified level, however costs of certification have not been budgeted for.

<u>Incremental budget implication for LEED Certification:</u> An additional \$100,000 will be needed to cover documentation costs for the certification process.

<u>Incremental strategies for LEED Silver:</u> Use of rapidly renewable materials, a reduction in the heat island effect, and enhanced refrigerant management; increased daylight and views to the outside, separation of indoor chemicals and pollutants from occupants, and better indoor air quality due to a management plan during construction as well as ongoing monitoring of carbon dioxide levels in the air supply; enhanced commissioning, measurement and verification of energy usage and a 30% reduction in the use of potable water.

Total additional upfront costs: \$413,000

Total additional annual O&M savings: \$(1,000)

<u>Incremental strategies for LEED Gold:</u> Storm water management system to manage the quality of pollutants and encouraging alternate transportation; increased ventilation, day light and views from 90% of interior spaces, greater thermal comfort, and further optimization of energy usage.

Total additional upfront costs: \$791,000 Total additional annual O&M costs: \$17,000

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 8 of 12

• <u>Southeast Branch Library</u> – Baseline LEED approach: This project is currently targeting designing to a LEED certified level, however costs of certification have not been budgeted for.

<u>Incremental budget implication for LEED Certification:</u> An additional \$100,000 will be needed to cover documentation costs for the certification process

<u>Incremental strategies for LEED Silver:</u> Use of regional and rapidly renewable materials and enhanced refrigerant management; increased daylight and views to the outside from 75% of interior spaces, separation of indoor chemicals and pollutants from occupants, and better indoor air quality due to a management plan during construction as well as ongoing monitoring of carbon dioxide levels in the air supply; enhanced commissioning, measurement and verification of energy usage and a 30% reduction in the use of potable water.

Total additional upfront costs: \$364,000 Total additional annual O&M costs: \$1,000

<u>Incremental strategies for LEED Gold:</u> Storm water management system to manage the quality of pollutants, increased ventilation, day light and views from 90% of interior spaces, and on-site renewable energy.

Total additional upfront costs: \$676,000 Total additional annual O&M costs: \$17,000

Recommendations: Although the above analysis does not demonstrate any significant financial advantage to raising LEED targets, there are other benefits to doing LEED as have been mentioned above, including environmental and occupant health benefits in addition to some financial benefits.

Taking into account these benefits and the City's desire to establish a leadership role in the area of environmental sustainability, staff believes that it is important to move ahead with a higher LEED goal on some of the projects being analyzed.

Based on the costs and the strategies being proposed, staff is recommending the following:

Bascom Branch Library and Community Center (Joint Facility) and Seventrees/Solari Joint Facility:

Staff is recommending targeting LEED Silver on both of these projects at a total additional upfront cost of \$1,574,000.

<u>Police Substation</u>:

Staff is recommending that this project continue to strive for LEED Silver. As stated in the March 6, 2007 memo, this project was being designed to potentially achieve LEED Silver. However, the recent 50% construction documents did indicate a substantially higher than anticipated cost estimate, some of which can be attributed to the LEED elements being incorporated into the project such as a vegetated roof, an extensive storm water management

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 9 of 12

system and a more efficient HVAC system. Though staff is not recommending adding any additional funding to this project specifically for LEED Silver, it should be noted that the overall budget for this project is proposed to be augmented in the FY 07-08 Budget by tapping the contingency reserve as well as by reducing scope on the 911 Communications Dispatch Center project.

Fire Station No. 36:

Staff is recommending incorporating green building principles to the maximum extent possible on this project. It should be noted that all of the library and community center projects are already being designed to a certified level and thus the additional cost of certification is only for the actual documentation whereas Fire Station No. 36 is not being designed to a certified level and will need a substantial amount of funding to even obtain certification. This is due to the fact that when the project was budgeted, it was programmed to be less than 10,000 square feet and only needed to incorporate green building principles to the maximum extent possible per the 2001 Green Building Policy. In 2004, the program was reevaluated and the square footage increased to about 11,500 square feet. The increased square-footage coupled with construction cost escalation has created a funding challenge for the project and it is currently challenged to meet even the LEED certified equivalency.

The entire Public Safety Bond Program itself is also challenged with regards to funding and this has necessitated the proposed FY 07-08 budget to recommend two projects, the East and South Community Policing Centers to be put on hold as well as the significant downsizing of two other projects, Fire Station No. 2 and the 911 Communications Dispatch Center projects. Balancing the entire program's needs against the limited funding resources available to this project has led staff to the above recommendation.

Educational Park and Southeast Branch Libraries:

Though a cost benefit analysis has been completed for these two projects, the results of this analysis are limited due to the fact that sites have not yet been selected for this project. Staff is recommending that more specific analyses of these projects be done once site selection has been completed and the projects are in the preliminary design phase. Any funding recommendations will be brought forward as part of those analyses.

Funding Strategy and Implications: Staff is recommending the funding strategy stated below. Impacts of this strategy are also described below.

In order to fund the costs necessary to achieve LEED Silver for the Bascom Branch Library and Community Center, funding augmentations totaling \$636,000 are proposed, offset by reductions of \$318,000 from the Contingency Reserve: Library Bond Projects in the Branch Libraries Bond Projects Fund and a decrease of \$318,000 from Ending Fund Balance in the Parks and Recreation Bond Projects Fund.

In order to fund the costs necessary to achieve LEED Silver for the Seventrees Branch Library and Solari Community Center Joint Facility project, funding augmentations totaling \$938,000 are proposed, offset by reductions of \$313,000 from the Contingency Reserve: Library Bond

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 10 of 12

Projects in the Branch Libraries Bond Projects Fund and a decrease of \$625,000 from Ending Fund Balance in the Parks and Recreation Bond Projects Fund.

As a result of these actions, proposed funding in the Contingency Reserve: Library Bond Projects in the Branch Libraries Bond Projects Fund for 2007-2008 would decrease from \$1,360,807 to \$729,807. The 2007-2008 Proposed Ending Fund Balance in the Parks and Recreation Bond Projects Fund would decrease from \$4,554,155 to \$3,611,155. (Ending Fund Balance at the end of 2009-2010 in the 2008-2012 Proposed CIP would decrease from \$2,535,155 to \$1,592,155). It should be noted, however, that these reserves provides a cushion of about 1.6 % for the Library Bond program and about 2% for the Parks Bond program to hedge against higher than anticipated bids as well as other unforeseen conditions. In January 2007, a memo on the status of the bond programs was presented to Council. The memo highlighted the fact that due to high volatility and significant escalation of construction prices in the last two years, reduction in project scopes and budget increases have been required to keep the building program on track for the past three consecutive years and the remaining bond projects continue to be at risk with regards to maintaining already established scopes. Thus, using \$631,000 from the Library Bond and \$943,000 from the Parks Bond could potentially be putting these project scopes further at risk.

For the Library's share of the incremental cost increase to attain LEED Silver Certification, the only potential funding source, without significantly impacting library materials or other projects, is the Program Contingency Reserve. In the next fiscal year, construction awards are planned for four projects - Bascom, Seventrees, East San Jose Carnegie, and Santa Teresa. Combined, the construction budget for these four projects totals \$40,780,000. The only other significant reserves in the Library Capital Program provide materials, furniture, and computers for the new branches, as well as a technology reserve to improve efficiency and allow staff to respond to higher than anticipated usage at some of the new branches.

In the Park Bond several of the larger bond projects such as the Happy Hollow Park and Zoo project, the two joint facilities included in this analysis, the sports parks, and two of the larger trail projects, have yet to be awarded and reducing the contingency would further hamper the City's ability to hedge against market volatility.

Return on Investment

For all the projects, staff also analyzed targeting LEED Silver or Gold using a maximum return on investment approach. This can be achieved by focusing on more energy efficient HVAC systems and on on-site renewable energy solutions such as photovoltaic panels. Though this strategy may be more beneficial in the long term it requires a significantly higher initial investment which is infeasible at this time. Recognizing the potential benefits of using photovoltaic panels, staff is recommending providing infrastructure for the panels for all the three projects recommended to target LEED Silver, with the option of installing the panels at a later date either through other funding sources or through a public-private partnership.

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 11 of 12

POLICY ALTERNATIVES

The following alternatives are offered for consideration:

Alternative 1: Continue best effort on all projects within available funding.

Pros: Will not require any additional funding

Cons: Does not align with Council direction to strive for higher sustainability goals.

Alternative 2: Fund recommended Silver projects with monies from the FF&E Reserve in the General Fund

<u>Pros:</u> Will leave the bond programs intact, will not take away C&C or Park Trust funds for other potential projects

Cons: Will take away part of a reserve that is meant for all of the GO bond projects.

Alternative 3: Fund recommended Silver projects from Park C&C or Park Trust funds

Pros: Will not put other bond projects at risk

<u>Cons:</u> Will take away monies from land acquisition funds from districts that are already deficient in parkland

Alternative 4: Recommend all six projects target Silver LEED Pros: Will align existing projects with current City Policy

Cons: Will require an additional \$1.65 million in funding

Alternative 5: Recommend all six projects target LEED Gold

Pros: Will put City in a leadership role in setting sustainability standards

Cons: Will require an additional \$5 million in funding

CONCLUSION

With the recently amended Green Building Policy the City has shown its desire to position itself as a leader in environmental sustainability. The analysis has demonstrated that along with additional upfront costs there is a potential for increased maintenance costs. These costs could be offset by potential utility and operational savings over the life of the building resulting in net costs or savings depending on the specific strategies being used. The actual costs or savings that may be realized are hinged on several factors including future utility rates, advances in green technology and operational efficiencies. The analysis also shows that all of the LEED practices have either an environmental or user benefit.

Taking into consideration all of the far reaching benefits of LEED and Council direction to strive for the highest level possible while balancing against the financial resources available, staff is recommending LEED Silver certification as the target for three of the six projects being analyzed: Bascom Branch Library and Community Center, Seventrees/Solari Joint Facility, Police Substation; and a best effort to incorporate green building principles in the Fire Station No. 36 project.

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 12 of 12

Attachments (2)

Staff is recommending that Educational Park and Southeast Branch Libraries be analyzed at a later date once the sites haves been selected and preliminary design is underway

PUBLIC OUTREACH

This i	item does not meet any of the special outreach criteria below						
	Criteria 1: Requires Council action on the use of public funds equal to \$1 million or greater. (Required: Website Posting)						
	Criteria 2: Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. (Required: E-mail and Website Posting)						
	Criteria 3: Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. (Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)						
COORDINATION							
This memorandum was coordinated with the Green Building Executive Steering Committee, the Departments of Public Works, Environmental Services, Library, Parks, Recreation and Neighborhood Services, Police, Fire, General Services, Finance, City Manager's Budget Office, and the City Attorney's Office.							
	/s/ HIKADA ty City Manager						
For q	uestions please contact ED SHIKADA, Deputy City Manager, at 408-535-8190.						

ATTACHMENT A

May 15, 2007

Subject: LEED COST ANALYSIS FOR PIPELINE PROJECTS

Page 1 of 1

Attachment A – Summary of costs and savings for all projects. All costs/savings are expressed in the thousands.

Project Name	LEED	Total add.	Add. costs as % of	Total add.	Present value* of	Present value* of
	Level	upfront costs	construction costs	annual O&M	total O&M	total est. (savings)
				costs	costs/(savings)	from workforce
				/(savings)		productivity
Bascom Branch Library	Certified	\$100	0.5%	NA	NA	NA
and Community Center	Silver	\$636	2.9%	\$9	\$208	\$(433)
(40,000 square feet)	Gold	\$1,316	6.1%	\$17	\$675	\$(650)
Seventrees/Solari Joint	Certified	\$100	0.3%	NA	NA	NA
Facility	Silver	\$938	3.2%	\$8	\$415	\$(553)
(60,000 square feet)	Gold	\$1,378	4.7%	\$16	\$751	\$(829)
Police Substation	Certified	\$100	0.2%	NA	NA	NA
(105,000 square feet)	Silver	\$1,539	3.1%	\$55	\$2,323	\$(6,390)
	Gold	\$2,330	4.6%	\$52	\$2,082	\$(9,584)
Fire Station No. 36	Certified	\$377	6.9%	\$3	\$300	NA
(11,500 square feet)	Silver	\$870	15.8%	\$8	\$582	\$(913)
	Gold	\$1,636	29.8%	\$14	\$1,041	\$(1,370)
Educational Park Branch	Certified	\$100	1.1%	NA	NA	NA
Library	Silver	\$413	4.4%	\$(1)	\$(13)	\$(264)
(18,000 square feet)	Gold	\$791	8.5%	\$17	\$591	\$(396)
Southeast Branch Library	Certified	\$100	1.5%	NA	NA	NA
(12,000 square feet)	Silver	\$364	5.7%	\$1	\$20	\$(208)
	Gold	\$676	10.5%	\$17	\$631	\$(312)

^{*}Present value of costs/savings over the 40 year life of the project